

**ABSTRACT OF THE DISCLOSURE**  
**METHOD AND SYSTEM OF TRANSMITTING LOOPBACK CELLS**  
**THROUGH A SWITCHING NODE OF AN ASYNCHRONOUS**  
**TRANSFER MODE (ATM) NETWORK**

5

Method and system of transmitting a loopback cell of a connection established between a source ATM device and a destination ATM device of an ATM network, with the loopback cell being returned to one of the switching nodes located on the route used by the connection, and entering the switching node by a port of an adapter and going out of the switching node by the same port of the same adapter instead of another connected adapter used by normal cells of the connection. The method comprises the steps of detecting in another connected adapter whether the incoming cell includes a loopback condition, and if so, appending to the incoming cell a specific routing label indicating that the incoming cell is a loopback cell to be returned on the connection so that the specific routing label is used by the protocol engine of another connected adapter for transferring said loopback cell to an input port of another connected adapter whereby the loopback cell is transmitted over the ATM network from the port of the first adapter.

10

0076824-012201